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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/215,630 12/16/98 JIN

J CISCO-0650

EXAMINER
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WM02/0731

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TRAN. P	
ART UNIT	PAPER NUMBER

2664

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

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**Office Action Summary**

Application No.

09/215,630

Applicant(s)

JIN ET AL.

Examiner

PHUC H TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 23-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "packet modifier" in claims 12 & 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2, 7, 12-18 & 19-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the session" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the ToS/Differentiated" in line 2. There is insufficient antecedent basis for this limitation in the claim.

- Regarding to claim 12, the phrase "a data communications system to the data communications system" is not clear how the communications system to the same communications system.

Claim 17 recites the limitation "the ToS/Differentiated" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the ToS/Differentiated" in line 5. There is insufficient antecedent basis for this limitation in the claim.

- Regarding to claim 19, the phrase "a data communications system to the data communications system" is not clear how the communications system to the same communications system.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (U.S. Patent No. 6119160, Sep. 12, 2000) in view of Goss (U.S. Patent No. 5828653, Oct. 27, 1998).

- With respect to claim 1, Zhang teaches a method and apparatus for providing computer network, which interpreted as a user in a data communications network, which comprises: obtaining a user service profile for the user in response to a user log-

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in attempt to a service selection gateway (Fig. 2A shows steps 34); routing all packets originated by the user through the SSG during the session and passing the packets on to the data communications network (col. 3, lines 41-44). Zhang fails to teach the setting QoS for packet sent by a user, configuring with a QoS level, setting the QoS bits accordance with the QoS level. Goss teaches the setting QoS for packet sent by a user (e.g. col. 2, lines 20-22), configuring the user with the QoS level (col. 1, lines 13-14), and setting the QoS bits accordance with the QoS level (col. 2, lines 56-59) for guarantee the quality of service and connection to the user. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the QoS method in Goss' invention into Zhang for protecting the connection of the user in network and guarantee for the quality of service with the user.

- With respect to claims 2 & 4, Zhang fails to teach wherein all packets transmitted by the user have QoS bits set in accordance with the QoS level for the user. Goss teaches setting the QoS bits accordance with the QoS level (col. 2, lines 56-59) for controlling the connection of the user and indicating the quality of service for the user. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the QoS bits set in accordance with the QoS level for controlling and indicating the service for the user.

- With respect to claim 3, Zhang teaches a method and apparatus for providing computer network, which interpreted as a method of setting a user in a data communications network, which comprises: initiating a request to an authentication, authorization and accounting server in response to the user's attempt to log-in (e.g. Fig.

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2A show the block 38); receiving, in response to the request, a user service profile corresponding to the user (e.g. the user profile is stored in the memory such as Fig. 2 shows). Zhang fails to teach the user service profile including a Quality of Service field and using the Quality of Service field to set QoS bits within packets transmitted by the user. Goss teaches the QoS and the QoS bits within in the packet (col. 1, lines 12-24) for protection error and guarantee of connection for user. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the method of QoS in Goss' invention into Zhang for guarantee the connection of user to the network and protection the error.

- With respect to claims 5 & 19, Zhang teaches a method and apparatus for providing computer network, which is interpreted as a method of setting a user in a data communications network, which comprises: at a service selection gateway (block 20 in Fig. 1) to which the user is in communication a request from the user to communicate; and transmitting the packets belonging to the at least one packet flow to the data communications network. Zhang fails to teach assigning a particular Quality of Service level to at least one packet flow transmitted by the user and setting QoS bits within packets belonging to the at least one packet flow received at the service selection gateway in accordance with the Quality of Service level. Goss teaches assigning a particular Quality of Service level to at least one packet flow transmitted by the user (e.g. col. 1, lines 13-14) and setting QoS bits within packets belonging to the at least one packet flow received at the service selection gateway in accordance with the Quality of Service level (col. 1, lines 16-19) for controlling protecting in the

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communication and guarantee the service for the user. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the method of QoS in Goss' invention into Zhang for guarantee the connection of user to the network and protection the error.

- With respect to claims 6, & 15-16, Zhang discloses wherein all the packets of the at least one packet flow in an IP packet (e.g. the packet in Zhang's invention).

- With respect to claims 7, & 17-18, Zhang and Goss fail to explicitly teach wherein the QoS bits are the precedence bits within the ToS/Differentiated Services field of the IP packets, but it is inherently to a person of ordinary skill in the art at the time of the invention was made to know the QoS bits are in the ToS/Differentiated Services field of the IP packet.

- With respect to claim 8, Zhang teaches communicating between the service selection gateway and an AAA server the request (e.g. Fig. 2 shows the communication between the SSG and AAA).

- With respect to claims 9-11, Zhang fails to teach communicating between the service selection gateway and the AAA server information related to the quantity and the duration of time that packets transmitted by the user and modified by the service selection gateway with respect to the QoS bits. Goss teaches the bits respects to the quantity and duration of time (e.g. CBR, VBR1, VBR0...) for communication during congestion in the data network. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the QoS bits with

respect to the quantity and duration of time in the packet for protecting the communication during of congestion.

- With respect to claim 12, Zhang discloses an apparatus for setting Quality of Service bits of packets sent by a user of a data communications system to the data communications system, the apparatus comprises: a service selection gateway (SSG in Fig. 1) in communication with the user, the SSG also in communication with an authentication, authorization and accounting (AAA in Fig. 1) server, the SSG receiving a user service profile from the AAA server in response to an attempt to log-in by the user (e.g. block 40 in Fig. 2A); and a packet modifier associated with the SSG (e.g. the packets is modified at SSG). Zhang fails to teach the packet modifier modifying QoS bits of packets sent by the user to reflect the QoS level received for the user from the AAA server. Goss teaches the QoS bits of packet that reflect the QoS level (col. 1, lines 16-19) for controlling protecting in the communication and guarantee the service for the user. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the method of QoS in Goss' invention into Zhang for guarantee the connection of user to the network and protection the error.

- With respect to claims 13, 14,21, Zhang discloses wherein all packets transmitted by the user to the data communications network via the SSG are modified (e.g. Fig. 1 shows the transmitting by the user to the data communications network).

- With respect to claim 20, Zhang fails to teach wherein the QoS bit field is set to a value specified in the QoS request. Goss teaches the QoS bit is set to the values specified in the QoS request (e.g. col. 2, lines 41-44) for guarantee of communication



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and protection the quality of connection in the data network. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the QoS bits with setting to the value specified in the QoS request in the packet for protecting and guaranteeing the communication during of congestion.

- With respect to claim 22, Zhang fails to teach wherein the QoS bit field is set for all packets sent by the user to the data communications network via the SSG which packets belong to at least one packet flow specified in the QoS request. Goss teaches the QoS bit is set for all packets (e.g. the bits are set in the header of packets indications of connection) for the guarantee of service and connection. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the QoS bits with setting in all packets to the value specified in the QoS request in the packet for protecting and guaranteeing the communication during of congestion.

### ***Allowable Subject Matter***

6. Claims 23-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Daley et al. (U.S. Patent No. 6256309) discloses quality of service sensitive routes precomputed in bandwidth brackets.
- Opalka et al. (U.S. Patent No. 6259699) discloses system architecture for and method of processing packets and/ or cells in a common switch.
- Galan et al. (U.S. Patent No. 6188698) discloses multiple-criteria queueing and transmission scheduling system for multimedia networks.
- Lemaire et al. (U.S. Patent No. 6205149) discloses quality of service control mechanism and apparatus.
- Ganmukhi et al. (U.S. Patent No. 5850399) discloses hierarchical packet scheduling method and apparatus.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H TRAN whose telephone number is (703) 308-7471. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WELLINGTON CHIN can be reached on (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9314.

Phuc Tran  
Assistant Examiner  
Art Unit 2664

P.t  
July 26, 2001

  
**RICKY NGO**  
**PATENT EXAMINER**